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ABSTRACT

Public speaking texts urge speakers to organize their message in order to increase their audience's comprehension of it. Tests were run to determine if listeners understand better when three message organization variables are employed in a speech: explicit statement of the central idea, explicit statement of the main points, and transitions before and after main points. Eight versions of a speech, in which these variables were present or absent in various combinations, were prepared. Students listened to one version and then took a multiple-choice comprehension test on the material. The results showed that understanding of the speech did not improve significantly when these variables were present. It is suggested that operational definitions of "central idea" and "main points" be improved. (JK)

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THE EFFECT OF THREE MESSAGE ORGANIZATION VARIABLES UPON LISTENER COMPREHENSION

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Public speaking textbooks usually urge the would-be speaker to organize his message. Although many reasons are given for this prescription, one of the most common is that message organization will enhance listener comprehension.[1] My objective in this study is to determine if the rationale for the prescription to organize one' s message is valid. That is, does message organization lead to increased listener comprehension?

Review of Previous Research

A small body of experimental research has attempted to determine the relationship between message organization and receiver comprehension. Some of these previous studies have modified an original message by randomly ordering grammatical units within the message. Others have modified original messages by deleting or adding certain organizational devices.

Beighley reported a study in which disorganized versions of two speeches were created by randomly ordering the paragraphs of each of the "organized" speeches.[2] He found no significant difference in listener comprehension between the two versions. In a later replication study, Beighley obtained similar results.[3] In a study which I reported in another journal, I obtained results which did not agree with Beighley's findings even though I used the same operational definition (paragraph randomization) for "disorganization."[4]

Research conducted by Thompson[5] and Darnell[6] has shown that randomization of sentences either within paragraphs or an entire message adversely affects listener comprehension.

As I analyzed the research using randomization of order, I realized that such research is based upon a somewhat restricted operational definition for organization and therefore does not provide a complete test of the effect of message organization upon comprehension. Such research assesses only the effect of the "order" component of message organization. When viewed in this way, the somewhat conflicting results of the studies reported above can be more readily explained. When sentences are randomly ordered, greater disorder exists than when paragraphs are randomly ordered. A reasonable conclusion based on the research reviewed above is that a relatively high degree of disorder will adversely affect comprehension.

Still unanswered is whether such message organization factors as the explicit statement of the central idea and main points, use of transitions, proper coordination and subordination, and the use of initial and concluding summaries have any effect on comprehension.

A review of the investigations which modified an original message by including or deleting various organizational devices shows that attention has been centered on the following devices: initial summaries, concluding summaries, and transitional statements. Thistlethwaite, de Haan, and Kamenetzky formed a "poorly-organized" speech by omitting from a "well-organized" speech statements which told the audience what questions would be dealt with in the speech and all transitional statements between subtopics.[7] They found a well-organized speech produced greater comprehension than a poorly-organized one. Parker, in a similar study, found three or-

ganizational devices produced a significant difference in comprehension of a written message.[8] These devices were the use of topic sentences, beginning summaries, and concluding summaries. Thompson constructed a speech which made use of transitional material immediately after the introduction of the speech and before and after each main point.[9] He found the use of transitional material enhances listener comprehension. However, Thompson's research as well as Thistlethwaite, de Haan, and Kamenetzky's does not clarify whether the transitional statements called attention to the message by means of repeating or summarizing parts of the message. The superior comprehension may have resulted from increased repetition rather than the acuse of transitions.

In short, existing research has yielded support for some of the prescriptions made in public speaking textbooks. Prescriptions relating to such devices as explicit statement of the central idea and main points, use of transitional statements devoid of content, and proper coordination and subordination of materials have not as yet received attention from researchers.

Rationale

The present study is focused on three message organization variables: explicit statement of the central ideal of the message, explicit statement of the main points of the message, and the use of transitional statements before and after main points.

I chose these variables for three reasons. First, textbook writers often argue that one or more of the independent variables are necessary to promote clarity.[10] Textbooks also point to a close relationship between clarity and understanding or comprehension.[11] Second, no adequate test has yet been made of the importance of the three variables in enhancing lis-

tener comprehension. The last reason I chose these variables is that a preliminary investigation showed that their presence or absence in a message could be reliably judged by speech-communication experts. Other message organization variables such as the coordination of main points, subordination of main points to the central idea, and coordination of subpoints could not be reliably judged in the preliminary investigation. The ability to reliably determine the presence or absence of a given variable was a necessary requisite if I were going to manipulate the presence or absence of the variables in stimulus messages.

Hypotheses

1. Listener comprehension is superior when the central idea of the speech is explicitly stated as opposed to when it is not explicitly stated.

2. Listener comprehension is superior when the main points of a speech are explicitly stated as opposed to when they are not explicitly stated.

3. Listener comprehension is superior when transitions are present before and after main points as opposed to when they are absent.

4. Listener comprehension is superior when two or three of the independent variables are present as opposed to when only one is present.

Procedures

I utilized a 2 x 2 x 2 design with a single control group in this experiment. Each treatment group received a version of the stimulus message and the dependent measure. The control group received the dependent measure only.

A message on a somewhat controversial topic was reasoned to enhance the likelihood that subjects would attend to the message. The message argued that all church property and income should be taxed.

Eight versions of the message were constructed, identical except for the deletions designed to manipulate the presence or absence of the independent variables. The eight versions corresponded to the eight treatment conditions illustrated in Table 1.

The complete version of the stimulus message was recorded on audiotape by a male graduate student in the Department of Communication at Purdue University. The message was read verbatim. From this original audiotape the other seven versions of the speech were dubbed with appropriate deletions. Thus, there were no differences in such variables as vocal inflection, pronunciation, and pauses from one version to the next. Subjects exposed to the incomplete versions seemed to be unaware that they were listening to an edited tape.

The complete version of the stimulus message required eleven minutes and forty-eight seconds to present while the version with the largest number of deletions required ten minutes and thirty-five seconds. The difference in time between the longest and shortest version was not considered large enough to affect the results of the experiment.

To determine whether the independent variables had been successfully manipulated in the eight versions of the stimulus message, three experts in speech-communication (graduate students or full-time teachers in the Department of Communication at Purdue) analyzed a typewritten copy of each version. A total of twenty-four experts in speech-communication were involved in this analysis--no one of whom analyzed more than one of the eight versions of the message. All of the individuals involved in the analysis agreed with my own evaluation concerning the presence or absence of transitional sentences before and after main points. Twenty-one out of twenty-four experts agreed with my classification in regards to the central idea

variable. Nineteen agreed with the classification I originally made on the main points variable. The fact that all of the disagreement which occurred in the evaluation of the central idea and main points variables took place in the versions in which these variables were specified as being absent helps to explain the failure to obtain unanimous agreement. That is, the absence of explicit statement of the central idea and main points (in an otherwise well-organized message) seemed to result in a tendency for speech-communication experts to look for and eventually discover a central idea and main points even though they were not explicitly stated. Because the agreement was quite high and because the disagreement was found exclusively in those instances where the dependent variables were absent, further revision of the stimulus message seemed unwarranted.

Originally, a forty-eight item multiple-choice test was prepared to measure comprehension of the speech. These items asked subjects to recognize facts or concepts described in the speech and identify relationships between facts or concepts. In addition, one item required subjects to identify the thesis of the speech.

Reliability of the forty-eight item test was determined in a pilot study. As a result of it analysis of the pilot study data, the test was reduced to thirty-five items. A reliability coefficient was obtained from the data collected during the main experiment. The coefficient obtained from the thirty-five item test was .75.

I also determined whether the comprehension test was able to discriminate between Ss who did and did not hear the speech. This was done by comparing the mean of the control group in the main experiment with each of the eight treatment group means. A one-way analysis of variance yielded a significant F ratio. Next a Tukey (a) post-hoc test revealed that the

control group mean was significantly lower than each of the eight treatment group means. Thus the comprehension test was measuring comprehension of the speech rather than general information the subjects might have had concerning the subject of the speech.

Subjects were "volunteer" students enrolled in a required, freshman level, basic speech course at Purdue University in the Fall Semester, 1969. Volunteers were given credit for one of five outside listening reports assigned in the course for their participation in the experiment. Since the subjects did not have to fill out a report, the volunteers were probably not characterized by a higher degree of motivation than nonvolunteers.

All subjects were asked to report for the experiment at the same time and place. When subjects arrived for the experiment, they were given a small slip of paper with a room number written on it and asked to report to that room. The distribution of the pieces of paper to subjects resulted in an approximated random assignment of subjects to treatment conditions. Thus, while subject selection could hardly be called random, subject assignment to experimental conditions was random.

Results

The means for each of the eight treatment groups is shown in Table 1. The data were analyzed by means of a three factor analysis of variance design with each factor having two levels. None of the main effects or interactions was significant at the .05 level.

TABLE 1

Treatment Group Means

	Central Idea Present		Central Idea Absent	
	Main Points Present	Main Points Absent	Main Points Present	Main Points Absent
Transitions Present	21.563	19.406	20.063	21.219
Transitions Absent	20.250	19.750	19.219	18.063

Discussion

Many public speaking textbooks have either argued that explicit statement of the central idea and main points and the use of transitions promotes clarity in a speech and thus aids listener comprehension. Such general statements and inferences seem unwarranted in light of the present research.

The findings of this study also run counter to findings reported in previous studies with respect to the use of transitional statements. This disagreement in results is probably a function of differing operational definitions. As I mentioned earlier, repetition may have enhanced listener comprehension in previous studies.

One possible explanation for the failure to obtain significant main effects with respect to the central idea and main points factors is that

the two independent variables may not have been effectively operationalized. As I mentioned earlier, speech-communication experts failed to unanimously agree with my classification concerning the presence or absence of the central idea and main points in the eight versions of the stimulus message. Given the nature of the disagreements which occurred, the level of agreement obtained in both cases seemed sufficiently high to warrant proceeding without further revision of the stimulus message. In retrospect, however, one might wonder whether the central idea and main points were, in fact, adequately operationalized. If they were not, such failure could account for the failure of these factors to produce significant differences in listener comprehension scores.

The findings reported here imply two suggestions for future research on the effect of message organization variables. The first of these suggestions echoes Becker's call for developing imporved operational definitions.[12] Some message organization variables such as coordination of main points, subordination of material to main points, and subordination of main points to the central idea were not included in the present study because of the difficulties associated with operationalizing these variables. In addition, the problem of the operational definitions used in the study have already been mentioned.

The second suggestion for future research deals with re-examining previous research in which two or more message organization variables were studied in combination. Often these studies have failed to gather data in such a way as to allow the researcher to determine the effect of each variable in isolation. For example, some of the research dealing with beginning and concluding summaries also involved the use of transitions or topic sentences without any attempt to determine the effects of such variables

separately. Also, the effect of transitional statements and mere repetition have often not been separated. Using an experimental design similar to the one used in the present study should allow the researcher to determine the effect of the variables in isolation as well as in combination.

When the research which has been suggested here has been carried out, the relationship between message organization and listener comprehension should be more clearly understood than it is now.

Endnotes

[1]Donald C. Bryant and Karl R. Wallace, Fundamentals of Public Speaking (New York, 1960), p. 36.

[2]K. C. Beighley, "An Experimental Study of the Effect of Four Speech Variables on Listener Comprehension," Speech Monographs, XIX (November 1952), 249-258.

[3]K. C. Beighley, "An Experimental Study of the Effect of Three Speech Variables on Listener Comprehension " Speech Monographs, XXI (November 1954), 248-253.

[4]Arlee Johnson, "A Preliminary Investigation of the Relationship Between Message Organization and Listener Comprehension " Central States Speech Journal, XXI (Summer 1970), 104-107.

[5]Ernest Thompson, "An Experimental Investigation of the Relative Effectiveness of Organizational Structure in Oral Communication," Southern Speech Journal, XXVI (Fall 1960), 59-69.

[6]Donald K. Darnell, "The Relation Between Sentence Order and Comprehension," Speech Monographs, XXXIV (June 1963), 97-100.

[7]Donald L. Thistlethwaite, Henry de Haan, and Joseph Kamenetzky, "The Effects of 'Directive' and 'Non-Directive' Communication Procedure on Attitudes," Journal of Abnormal and Social Psychology, LI (1955) 107-113.

[8]John P. Parker, "Some Organizational Variables and their Effect upon Comprehension," Journal of Communication, XXI (March 1962) 27-32.

[9]Ernest Thompson "Some Effects of Message Structure on Listeners' Comprehension," Speech Monographs, XXXIV (March 1967), 51-57.

[10]Alan H. Monore and Douglas Ehninger, Principles of Speech, Fifth Brief Edition (Chicago, 1964), pp. 143, 179-180; Martin P. Andersen, Wesley Lewis, and James Murray, The Speaker and His Audience, (New York 1964), p. 279; and Robert T. Oliver and Rupert L. Cortright, Effective Speech, (New York, 1961), p. 447.

[11]Andersen, Lewis, and Murray, pp. 384-385; Charles W. Lomas and Ralph Richardson, Speech: Idea and Delivery, (Boston, 1963) p. 13.

[12]Samuel L. Becker, "Methodological Analysis in Communication Research," The Quarterly Journal of Speech, LI (December 1965), 382-391.